

D R A F T
21 July 1970

MEMORANDUM FOR: Chief, Plans & Programs Division, PPBS/NPFC
SUBJECT : Management Information System (MIS)

What is the MIS?

The MIS handbook gives the following definition:

"The MIS is a method of collecting data on Center activities in order to provide a systematic means of accounting for tasks levied on the Center, the effort expended by Center personnel, and a record of the resulting products. The information acquired can be used not only to determine how manpower was used, but also to assess the status of work in process and to determine the Center's capability to take on additional work and the relative priority in which it will be accomplished. Furthermore, based on past performance, the MIS can assist in projecting the Center's need for manpower and funds.

The system provides information. It does not make decisions-- that is the responsibility of management. It does, however, enable management to make decisions based on a greater range of information than would be possible without the system.

The system is quantitative only in that it records how much was produced, how long an effort took, or how many man-months of effort were involved. It does not evaluate quality. The

customer is the judge of the quality of the Center's product the supervisor of the employee's performance.

The effectiveness of the MIS is chiefly determined by the information entered into it. Since most of the information going into the system comes from the individual employee's accounting for his time, the wholehearted cooperation of each person is essential for the system to work properly."

What is the Purpose of the MIS?

1. To provide a statistical base from which management can assess past and current operations and to plan for oncoming commitments.
2. To provide a tool to be used by the line manager in evaluating his component's performance.
3. To present information to production components for planning and controlling their work.
4. To report status information of the Center's work flow.
5. To provide a standardized method of accounting for and reporting manpower utilization.

In What Ways has the MIS Been Used?

1. For analysis of specific projects or programs to determine:
 - a. Cost of a project or program in terms of manpower and dollar equivalents.
 - b. Duration of a project.
 - c. Types of activities (PI, editing, graphics, etc.) associated with a project and the cost of each; e.g., what is the PI cost of a certain report, what is the cost of security escort duty, etc?
 - d. Overtime costs for various projects.

- e. The types of projects associated with the various NPIC components.
 - f. The number of projects started, cancelled, or completed in a given period of time, and the number of projects currently in work.
2. To forecast the effort required to exploit a mission.
 3. To provide the Production Management Board with a project status report to facilitate project scheduling.
 4. To show NPIC support to CIA and non-CIA components.
 5. To answer ad hoc requests for information by the various levels of NPIC and Agency management. These requests vary from computer utilization, report production, costs of certain programs, planning, budgeting, training, travel, etc.

Why is the MIS Needed?

1. It is the only source of Center-wide information by which management at all levels can measure the Center's performance.
2. It enables all Center personnel to use the same system thereby reducing operation costs.

What are the Costs of the MIS?

1. There are the PSG/AID personnel costs to administer the system. Included here are the costs to perform the functions dealing with the computer operations, inputting of data, producing reports, and maintaining the file. Roughly, this amounts to (Based on two plus man years at the Center's average salary.)
2. If purchased, computer time for the MIS would cost about per year; (Based on two hours of computer time per week at approximately

[redacted] however, since we own our computers and we have not reached a saturation level on computer utilization we do not include this in our total MIS costs.

3. The cost for such activities as preparing time sheets and requesting special retrievals from the MIS is approximately [redacted] per year. (Based on the Center's average salary and each individual spending 15 min/week filling out his time sheet.)

4. It is estimated that keypunching of time cards runs about [redacted]
[redacted]

5. The total cost of the MIS without considering the sunk computer cost of [redacted]

6. Expressed another way, for approximately 8 man years we have a Center-wide project time reporting system.

In View of the Costs, What are the Alternatives and What can be Said for Each?

1. Drop the central system (MIS) and allow each group to develop its own system to meet its needs. Assume that the Center's total needs can be met by an amalgamation of the data from the individual systems. This alternative may well cost us more than ^{the} ~~its~~ present system because of the cost of correlating data from different systems.

2. Continue the system as it presently exists. It will still serve many purposes but its full potential will not be realized because of its relative slow response time.

3. Improve the MIS. Modify the system and its operating procedures to insure a more rapid turn-around-time thus increasing its usefulness to the Center's managers.

Recommendation

1. The MIS should be retained.
2. The MIS should be improved.

3. Once the system has been improved the MIS data should be studied analytically to determine what further action should be taken.

What is to be Gained by Approving These Recommendations?

1. First, the Center would preserve a Center-wide information system by which management at all levels can measure the Center's performance.

2. Second, the Center would continue a system that has over the years met the needs of the Center's managers, in spite of its shortcomings, in spite of numerous reorganizations, in spite of new exploitation requirements, and in spite of the many attempts to replace or circumvent the MIS with other information systems which were tried but failed.

3. Third, the Center would continue a system which is familiar to all Center employees. To discontinue the MIS and to attempt to replace the MIS with some other system would have real costs relative to indoctrination and re-establishment of a routine with regard to record keeping, employee familiarization, and information retrieval.

4. Fourth, the problem of timeliness can be improved significantly.

5. Fifth, the system itself would be used not only for management information needs but to provide the necessary feedback to improve the MIS.

explain and/or express more clearly the point

What Improvements Can be Made to the MIS Immediately?

1. *Reduced costs* *achieved*
~~Input to the system~~ can be reduced by dropping the requirement that the O/DIR, PPBS, and SS submit *detailed* time sheets into the system.

removed. The improvement is not reduced input.

2. A method can be devised to input bulk time against specific overhead projects for the above three components. In this way the MIS would continue to reflect all Center overhead and yet reduce the number of input transactions.

What is the Rationale for This?

1. O/DIR, PPBS, and SS can be considered direct overhead to the Center, in which case time sheets for individuals in the organizational components

are not necessary.

2. Further, we can determine before hand the type of activities associated with individuals within these three components, estimate the man hours, aggregate the time and submit one entry into the computer.

What Other Improvements Can be Made?

1. The timelines of the system can be improved by:
 - a. Setting the policy and procedure by which each group can prepare and submit its man-hour data directly to the computer via Remote Console rather than the current time consuming method of submitting time sheets to PSG/AID for key-punching, sorting, listings, checking and for the updating of the computer files.
 - b. Provide the computer programs which will ^{read} ~~read~~ each groups man-hour data into the computer, ^{will} ~~which~~ check the data for correctness of entry and automatically return an error listing for immediate corrective action.
 - c. Provide drum rather than the slower tape storage for the weekly man hour data.
2. The editing and auditing of MIS data (now manually performed) can be done automatically if:
 - a. Computer software and drum storage is provided.
 - b. Skill tables are added to the file.
3. Keeping the MIS from getting out of hand by:
 - a. Providing the software by which analytical studies of the MIS data can be made thus preventing misuse of the system.
 - b. Developing the software to provide a profile analysis of Center resources to determine the best method of collecting and distributing MIS data.

What will These Improvements Cost?

1. Approximately six man months of analysis and design support.
2. And twelve man months of programming support.

To Summarize Then:

1. There exists a system which in spite of its shortcomings provides the Center with information necessary to gage the performance of the Center.
2. Immediate improvements to the system can be made by not requiring the O/DIR, PPBS and SS to fill out time sheets.
3. ~~We can make~~ Significant improvements ^{CAN BE MADE} to the MIS in terms of timelines, edits, audits, and analysis by investing approximately one and one half years of systems analyst and programmer support.